

MPS 5/03 S TN B B**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

Product image

OMNIMATE® 4.0 - the next evolution step OMNIMATE® 4.0 follows the trend of One Cable Technology (OCT). The modular concept enables the fast configuration of hybrid interfaces, which transmit data, signals and energy in a single connector. As a result, you can reduce the cabling effort in a wide variety of applications, simplify maintenance and accelerate automation processes. The unique SNAP IN connection is the backbone and speeds up the wiring process. The fastest connection yet

- Fast, safe, and tool-free wiring due to unique SNAP IN connection
 - Ready for Robot through "wire ready" delivery with open clamping point
 - Optical and acoustic feedback indicates proper wiring
- Create your own configuration

- Flexible configuration and ordering via the Weidmüller Configurator (WMC)
- Dispatch within three days – even for individually configured products
- Automatic offer preparation for the configured product

Simply configuration of modular hybrid connectors

- Flexible combination options for power, signal and data transmission
- Future-proof Single-Pair Ethernet technology

General ordering data

| | |
|--------------|---|
| Version | PCB plug-in connector, female plug, Pitch in mm (P): 5.00 mm, Number of poles: 3, 180°, Box |
| Order No. | 2741570000 |
| Type | MPS 5/03 S TN B B |
| GTIN (EAN) | 4064675054986 |
| Qty. | 1 14 items |
| Product data | IEC: 400 V / 26.8 A / 0.5 - 4 mm ² UL: 300 V / 18.5 A / AWG 20 - AWG 12 |
| Packaging | Box |

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Technical data

Approvals

Approvals

ROHS Conform

UL File Number Search [UL Website](#)

Certificate No. (cURus) E60693

Dimensions and weights

| | | | |
|------------|---------|-----------------|-------------|
| Depth | 34 mm | Depth (inches) | 1.3386 inch |
| Height | 15.5 mm | Height (inches) | 0.6102 inch |
| Width | 15.8 mm | Width (inches) | 0.622 inch |
| Net weight | 7.98 g | | |

Temperatures

Ambient temperature -50 °C... 125 °C

Environmental Product Compliance

RoHS Compliance Status Compliant without exemption

REACH SVHC No SVHC above 0.1 wt%

System Parameters

| | |
|--|------------------------|
| Product family | OMNIMATE 4.0 |
| Type of connection | Field connection |
| Wire connection method | SNAP IN with lever |
| Pitch in mm (P) | 5.00 mm |
| Pitch in inches (P) | 0.197 " |
| Conductor outlet direction | 180° |
| Number of poles | 3 |
| L1 in mm | 10.00 mm |
| L1 in inches | 0.394 " |
| Number of rows | 1 |
| Pin series quantity | 1 |
| Touch-safe protection acc. to DIN VDE 57 106 | Safe from finger touch |
| Touch-safe protection acc. to DIN VDE 0470 | IP 20 |
| Protection degree | IP20 |
| Volume resistance | ≤5 mΩ |
| Stripping length | 9 mm |
| Stripping length tolerance | min. 8 mm |
| | max. 10 mm |
| Plugging cycles | 25 |
| Plugging force/pole, max. | 8.5 N |
| Pulling force/pole, max. | 8.5 N |

Material data

| | | | |
|----------------------------------|----------|-----------------------------|----------|
| Insulating material | PBT GF | Colour | black |
| Colour chart (similar) | RAL 9011 | Insulating material group | I |
| Comparative Tracking Index (CTI) | ≥ 600 | Moisture Level (MSL) | |
| UL 94 flammability rating | V-0 | Contact material | Cu-alloy |
| Contact surface | tinned | Storage temperature, min. | -25 °C |
| Storage temperature, max. | 55 °C | Operating temperature, min. | -50 °C |

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Operating temperature, max. 125 °C

Conductors suitable for connection

Clamping range, min. 0.34 mm²Clamping range, max. 4 mm²Solid, min. H05(07) V-U 0.5 mm²Solid, max. H05(07) V-U 2.5 mm²Flexible, min. H05(07) V-K 0.5 mm²Flexible, max. H05(07) V-K 4 mm²w. plastic collar ferrule, DIN 46228 pt 4, 0.34 mm² min.w. plastic collar ferrule, DIN 46228 pt 4, 2.5 mm² max.w. wire end ferrule, DIN 46228 pt 1, 0.34 mm² min.w. wire end ferrule, DIN 46228 pt 1, 2.5 mm² max.

Outer diameter of insulation, max. 4.00 mm

| | | | |
|---------------------|--|------------------------------|-----------------------------|
| Clampable conductor | Cross-section for conductor connection | nominal | 0.34 mm ² |
| | | Stripping length | nominal 10 mm |
| | wire end ferrule | Recommended wire-end ferrule | H0.34/12 TK |
| | | Stripping length | nominal 12 mm |
| | Cross-section for conductor connection | nominal | 0.5 mm ² |
| | | Stripping length | nominal 12 mm |
| | wire end ferrule | Recommended wire-end ferrule | H0.5/16 OR |
| | | Stripping length | nominal 10 mm |
| | | Recommended wire-end ferrule | H0.5/10 |
| | | Stripping length | nominal 10 mm |
| | Cross-section for conductor connection | nominal | 0.75 mm ² |
| | | Stripping length | nominal 12 mm |
| | wire end ferrule | Recommended wire-end ferrule | H0.75/16 W |
| | | Stripping length | nominal 10 mm |
| | | Recommended wire-end ferrule | H0.75/10 |
| | | Stripping length | nominal 12 mm |
| | Cross-section for conductor connection | nominal | 1 mm ² |
| | | Stripping length | nominal 12 mm |
| | wire end ferrule | Recommended wire-end ferrule | H1.0/16 GE |
| | | Stripping length | nominal 10 mm |
| | | Recommended wire-end ferrule | H1.0/10 |
| | | Stripping length | nominal 12 mm |
| | Cross-section for conductor connection | nominal | 1.5 mm ² |
| | | Stripping length | nominal 12 mm |
| | wire end ferrule | Recommended wire-end ferrule | H1.5/16 R |
| | | Stripping length | nominal 10 mm |
| | | Recommended wire-end ferrule | H1.5/10 |
| | | Stripping length | nominal 12 mm |
| | Cross-section for conductor connection | nominal | 2.5 mm ² |
| | | Stripping length | nominal 10 mm |
| | wire end ferrule | Recommended wire-end ferrule | H2.5/15D BL |
| | | Stripping length | nominal 10 mm |
| | | Recommended wire-end ferrule | H2.5/10 |

Reference text The outside diameter of the plastic collar should not be larger than the pitch (P). Length of ferrules is to be chosen depending on the product and the rated voltage.

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Technical data

Rated data acc. to IEC

| | | | |
|---|------------------------|---|--------|
| tested acc. to standard | IEC 60664-1, IEC 61984 | Rated current, min. number of poles (Tu=20°C) | 26.8 A |
| Rated current, max. number of poles (Tu=20°C) | 19.7 A | Rated current, min. number of poles (Tu=40°C) | 23.1 A |
| Rated current, max. number of poles (Tu=40°C) | 16.9 A | Rated voltage for surge voltage class / pollution degree II/2 | 400 V |
| Rated voltage for surge voltage class / pollution degree III/2 | 320 V | Rated voltage for surge voltage class / pollution degree III/3 | 250 V |
| Rated impulse voltage for surge voltage class/ pollution degree II/2 | 4 kV | Rated impulse voltage for surge voltage class/ pollution degree III/2 | 4 kV |
| Rated impulse voltage for surge voltage class/ contamination degree III/3 | 4 kV | | |

Rated data acc. to UL 1059

| | | | |
|---------------------------------------|--|---------------------------------------|--------|
| Institute (cURus) | CURUS | Certificate No. (cURus) | E60693 |
| Rated voltage (Use group B / UL 1059) | 300 V | Rated voltage (Use group C / UL 1059) | 150 V |
| Rated voltage (Use group D / UL 1059) | 300 V | Rated current (Use group B / UL 1059) | 18.5 A |
| Rated current (Use group C / UL 1059) | 18.5 A | Rated current (Use group D / UL 1059) | 18.5 A |
| Wire cross-section, AWG, min. | AWG 20 | Wire cross-section, AWG, max. | AWG 12 |
| Reference to approval values | Specifications are maximum values, details - see approval certificate. | | |

Important note

| | |
|----------------|---|
| IPC conformity | Conformity: The products are developed, manufactured and delivered according international recognized standards and norms and comply with the assured properties in the data sheet resp. fulfill decorative properties in accordance with IPC-A-610 "Class 2". Further claims on the products can be evaluated on request. |
| Notes | <ul style="list-style-type: none"> Rated current related to rated cross-section & min. No. of poles. P on drawing = pitch Rated data refer only to the component itself. Clearance and creepage distances to other components are to be designed in accordance with the relevant application standards. Wire end ferrule without plastic collar to DIN 46228/1 In accordance with IEC 61984, OMNIMATE-connectors are connectors without breaking capacity (COC). During designated use, connectors are not allowed to be engaged or disengaged when live or under load Long term storage of the product with average temperature of 50 °C and maximum humidity 70%, 36 months |

Classifications

| | | | |
|-------------|-------------|-------------|-------------|
| ETIM 6.0 | EC002638 | ETIM 7.0 | EC002638 |
| ETIM 8.0 | EC002638 | ETIM 9.0 | EC002638 |
| ETIM 10.0 | EC002638 | ECLASS 9.0 | 27-44-03-09 |
| ECLASS 9.1 | 27-44-03-09 | ECLASS 10.0 | 27-44-03-09 |
| ECLASS 11.0 | 27-46-02-02 | ECLASS 12.0 | 27-46-02-02 |
| ECLASS 13.0 | 27-46-02-02 | ECLASS 14.0 | 27-46-02-02 |
| ECLASS 15.0 | 27-46-02-02 | | |

Drawings

Product image

Dimensional drawing

Derating curve

Product benefits

Fastest connection technology SNAP IN

Product benefits

Acoustic and visual feedback

Counterpart

90° / Horizontal

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General ordering data

| | | |
|------------|----------------------------|--|
| Type | MHS 5/03 H T3 B T | Version |
| Order No. | 2741420000 | PCB plug-in connector, male header, THT/THR solder connection, |
| GTIN (EAN) | 4064675055396 | Pitch in mm (P): 5.00 mm, Number of poles: 3, 90°, Tube |
| Qty. | 33 ST | |

Counterpart**180° / Vertical**

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| | | |
|------------|----------------------------|--|
| Type | MHS 5/03 V T3 B T | Version |
| Order No. | 8000072430 | PCB plug-in connector, male header, THT/THR solder connection, |
| GTIN (EAN) | 4064675422983 | Pitch in mm (P): 5.00 mm, Number of poles: 3, 180°, Tube |
| Qty. | 33 ST | |

Counterpart**270° / Horizontal**

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General ordering data

| | | |
|------------|----------------------------|--|
| Type | MHS 5/03 W T3 B T | Version |
| Order No. | 8000072503 | PCB plug-in connector, male header, THT/THR solder connection, |
| GTIN (EAN) | 4064675330806 | Pitch in mm (P): 5.00 mm, Number of poles: 3, 270°, Tube |
| Qty. | 33 ST | |